

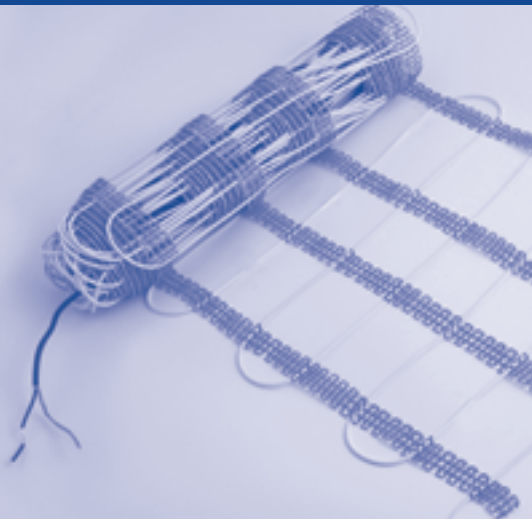
WICKES UNDERTILE WARMING SYSTEMS AND THERMAL AQUAPANEL

Electric underfloor warming is fast becoming an essential product when laying a newly tiled floor. The Wickes electric underfloor warming systems are ideal products to make ceramic or stone floors a pleasure to walk on. Both Wickes systems enable you to have the floor finish of your choice without the discomfort of cold feet. It complements other household heating systems giving a luxury underfoot feel

to bathrooms, kitchens and conservatories, whilst being economical and adding value to your home.

Wickes Thermal Aquapanel is an insulated tile backing board which, when used in conjunction with either warming system will enhance your pleasure still further.

Wickes sell two underfloor warming systems – The Mat system and the Coil system, both have advantages and disadvantages. Mat is easier and quicker to lay over large areas but is slightly more expensive, whilst Coil is less expensive but taking longer to lay. Floor preparation is similar, but the system laying methods are different. The following should help you decide which system is best for you.



SUB FLOOR PREPARATION

Please see Good Idea Leaflet 33 and 54 for advice on sub floor preparation. Available in store or on our website at: www.wickes.co.uk.

With any job, good planning is essential. We're all tempted to cut corners to save time or money; it's human nature. Don't be tempted, especially when laying a floor warming system.

Why? When the system is laid, bonded to the floor, the tiles are stuck down and grouted, can you honestly say you will undo all that work to rectify a shortcut or mistake? Most people won't, they'll live with it, blaming everything but themselves – we all do it!

On the other hand, with a little extra thought and planning, you will have a job you can be proud of. Something that will last a long time, look good and will feel great on those cold winter mornings. Best of all, you will have added value to your property. Whilst the systems are easy to install, if you are not sure of something or in the unlikely event you have a problem – stop, and call the relevant helpline, they'll be glad to help.

DOs & DON'Ts

Don't cut corners with preparation or installation.

Always read and follow the manufacturer's instructions. Sometimes instruction can seem a little illogical when first read, but they are there for a good reason.

Manufacturers spend a lot of time, effort and money perfecting these, and there's nothing worse than finding out the hard way – and most of us have done it! Lay only on a correctly prepared, clean and dust free floor.

Both systems are very robust and will last a long time when correctly installed but, like anything electrical, they don't like being cut or nicked by sharp objects - so make sure you prepare the floor properly and don't use a knife near either system. The mat system will stretch in one direction but the matting (not the cable) will need to be cut to turn some corners or change direction. In this case, only use scissors. You can't shorten or join the heating cables for either system, so don't try. Always buy the correct size or combination of sizes (see enclosed table) for the floor area to be warmed. If you are using more than one mat or cable (coil), always take each individual connection back to the controller - never join them together.

Keep the cable spacing even and within the manufacturer's recommendations.

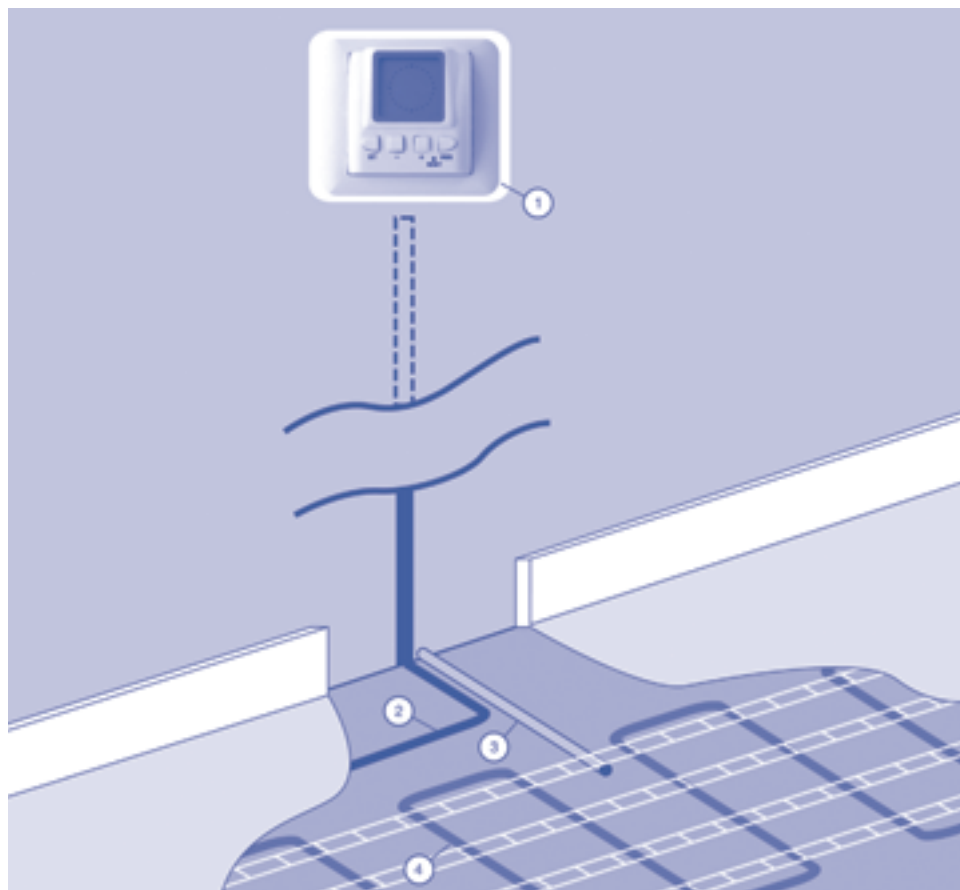
Too close and you will get hot areas, too far apart and your toes will be cold in the winter. As said earlier, you can't change it when it's down and tiled – so spend time here and get it right!

KEEP INFORMED

- Look for other Good Idea Leaflets that could help you with your current project.
- Check that your Good Idea Leaflets are kept up to date. Leaflets are regularly changed to reflect product changes so keep an eye on issue dates.
- If you would like to be put on our mailing list for the Wickes booklet, call our Freephone number which is:

0500 300 328

- Visit our website at www.wickes.co.uk



Key:

- 1. Programmable Thermostat
- 2. Cold tail for power supply

- 3. Floor temperature sensing probe
- 4. Heating element

Never connect a rolled up mat to a power supply. If you do, and switch on, it will create hotspots and melt. This will invalidate your guarantee.

Once unrolled, don't cross over heating cables. Again, if you do that point will quickly become a hot spot and could/will melt the insulation, causing the system to break down and stop working.

Never walk, or allow others to walk on unprotected cables.

When laid, always check the whole system works and is in the right place before covering with a layer of adhesive.

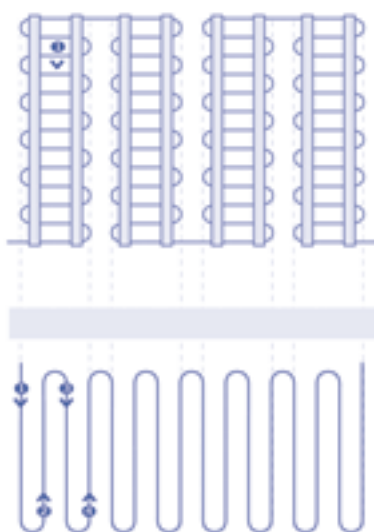
With all of our electrical products, we strongly recommend that you should not undertake electrical work unless you are competent to do so.

All electrical work must conform to BS 7671 the current IEE Wiring Regulations, and Part P of Building Regulations. You are advised to check with your local authority's Building Control Department, or an Authorised Competent Person, before starting. If in any doubt about electrical work, contact a qualified electrician.

WICKES MAT SYSTEM

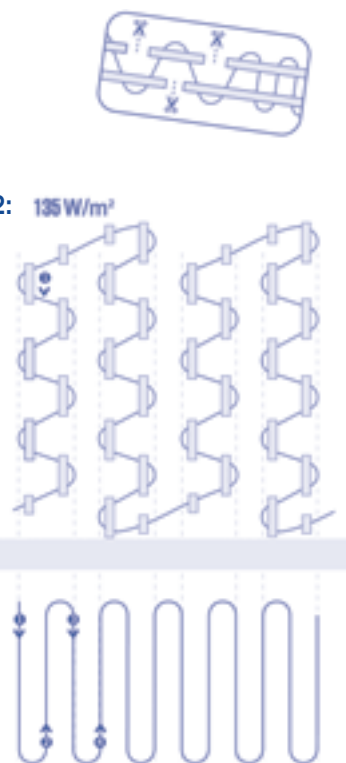
This system is ideal for quick installation into fairly normal shaped rooms or large areas.

Figure 1: 200W/m²



This shows the mat installed without any stretching so the output per m² would be the maximum possible - 200W/m². So this would be a 1.6 - 2.4m² mat at 1.6m².

Figure 2: 135W/m²



This shows the mat installed to it's maximum stretching so the mat can cover a larger area but the output per m² would be the minimum possible - 135W/m². So this would be a 1.6 - 2.4m² mat at 2.4m². The mat would only be stretched and installed like this on a wooden or insulated floor.

PROJECT SHOPPING LIST

Product	Size	Quantity
160120 320W	1.6 - 2.4m ²	
160121 480W	2.4 - 3.1m ²	
160122 640W	3.2 - 4.0m ²	
160123 1280W	6.4 - 8.0m ²	
Programmable Thermostat		
35mm 1G Metal Box		
13A Neon fuse spur		
Protective Channel		
Tiles of choice		
Floor tile Adhesive	12.5/25kg	
Floor & Wall tile grout	5/12.5kg	
Floor Tile Primer & Admixture	500ml	
Thermal Aquapanel	1200 x 600 x 10mm	
Thermal Aquapanel Fitting	Pk 20	
Thermal Aquapanel Jointing Tape	20m	
Exterior WBP Plywood	2240 x 1220 x 18mm	

- A mat system installation is simple and can be installed on any subfloor prepared for tiling.
- With one connection cable for easier installation.
- The cables are flexible so can be spaced to allow the mat to fit into larger areas.
- At normal spacing the Wickes warm touch mat system is rated at 200 watts/m² so it is powerful enough to give a luxurious warm floor.
- Suitable for areas of between 1.6 and 20m².
- Ideal for both renovation and new construction.
- Can be used with the Wickes Programmable Floor Thermostat which gives total control and much lower running costs.

- A roll of special self adhesive tape is included in each kit, making installation easy.
- Safe, maintenance free and totally silent in operation.
- Adds only a few millimetres to the depth of the floor.
- Covered by a 10-year guarantee.

Wickes mat system is available in four sizes. Each one is supplied with a 4 metre long connection cable and includes special double-sided tape for easy installation. Programmable thermostats are sold separately, as only one is required for each room (up to 16 amps).

When cutting the heating mat retaining fibres (never cut the cables) to turn corners etc. always use scissors, never a knife. If you cut or nick the heating cable call the helpline for advice.

- Prepare the subfloor. If this is concrete ensure that it is fully dry. If you have a timber floor this must be covered with either Thermal Aquapanel or with exterior WBP 18mm plywood screwed at a minimum of 200mm centres.
- Plan and mark the floor where you intend to put the mat and how to get the connection cables back to the control.
- Establish the location of the nearest electrical point, work out where you want the control to be installed and fit a deep (35mm) back box, cabling and protective channelling. Provide a mains supply to the thermostat.
- Work out the m² you require and cut the fabric strips to space the cables.
- Fix the mat down using the adhesive tape provided.
- Make sure the mat is now properly adhered to the sub-floor.
- Fit the floor (temperature) sensor.
- Test the system.
- Cover the system with Wickes Tile Adhesive in conjunction with Primer & Admixture (sku 230641) or flexible levelling compound. Use a 'none toothed' spreader or you'll damage the cable.
- Tile the floor using Wickes Floor Tile Adhesive in conjunction with Primer & Admixture (sku 230641), spread with a 'none toothed' spreader.
- Wait 10 days for the adhesive to dry properly before using your new warming system.

SIZING GUIDE

For mat system areas above 20m² please contact the free **Helpline** for assistance (0800 328 4980).

FLOOR AREA OF HEATING MAT

Mat size	1.6 - 2.4m ²	2.4 - 3.1m ²	3.2 - 4.0m ²	6.4 - 8.0m ²
1.6 - 2.4m ²	X			
2.4 - 3.1m ²		X		
3.2 - 4.0m ²			X	
4.0 - 5.0m ²	X	X		
4.8 - 6.0m ²	X		X	
5.6 - 7.0m ²		X	X	
6.4 - 8.0m ²				X
8.0 - 10.0m ²	X			X
9.6 - 12.0m ²			X	X
11.2 - 14.0m ²		XX		X
12.8 - 16.0m ²				XX
14.4 - 18.0m ²	X			XX
16.0 - 20.0m ²			X	XX

FAQs

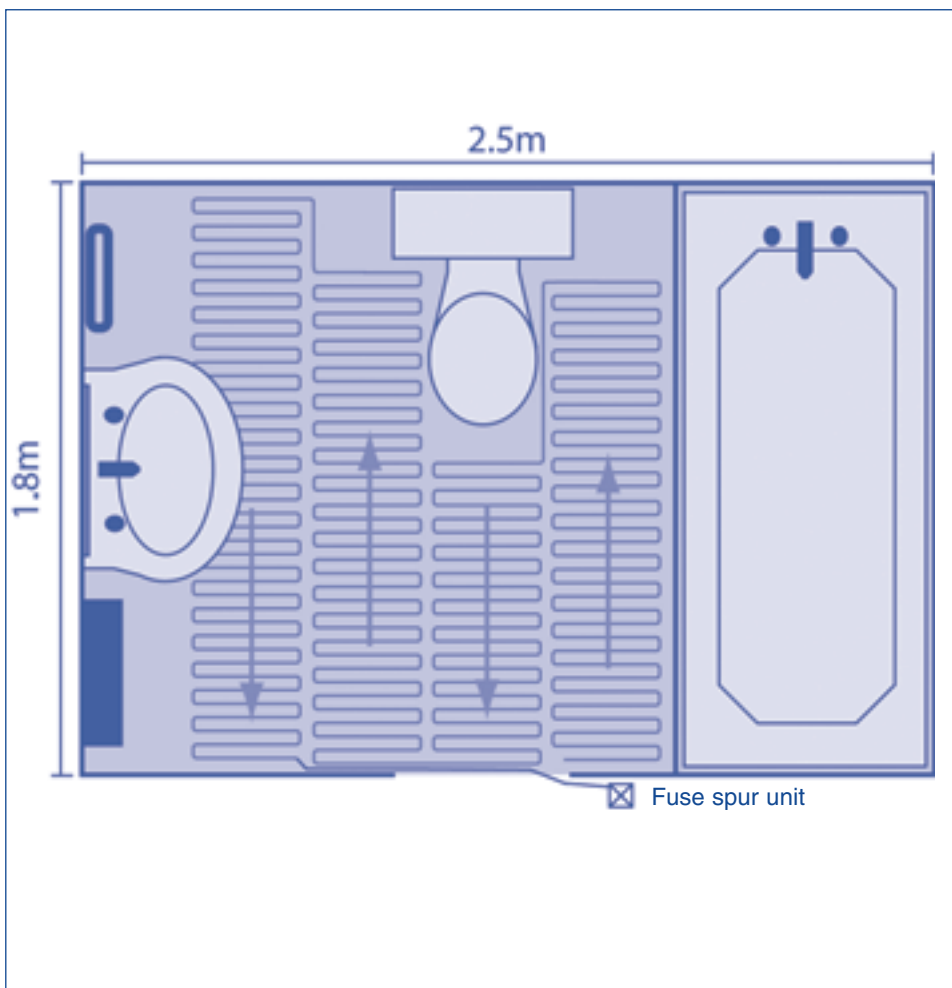
What happens if the system goes wrong?

Once the **WICKES MAT SYSTEM** underfloor warming system is correctly installed and the floor covering is laid on top, the heating mat will not malfunction and is covered by a manufacturers 10-year full floor guarantee (against manufacturing defect). If a manufacturing fault is diagnosed, once the floor is down, it can be traced to beneath 1 or 2 tiles.

Will it help to have insulation below the heating mat?

Yes - insulation will make the warming system thermally more efficient, the heating more effective and quicker to heat up (especially on those cold winter mornings) whilst reducing the running costs still further. Lightweight 10mm tile backer insulation boards (Thermal Aquapanel) are readily available in all Wickes stores.

Full instructions are supplied and there is a free technical Helpline, if required for the mat system (0800 328 4980).



IMPORTANT: Before buying your system please read the following technical advice as this will ensure you order the correct items and always buy the correct size warming system for your floor.

Never order too much matting and do not space the cables further than recommended (9cm). For example, a 1.6m² mat should not be stretched to more than 2.4m² as the system will lose too much power and the floor will not feel as warm (see table below). To measure how much mat you will need, allow a 10cm (4") border around the full perimeter of the room and calculate the remaining floor area in square metres. The Wickes mat system should not go under any fixed units, so deduct areas that will have permanent furniture and fittings, i.e. baths, basins, toilets, kitchen units etc.

When you have worked out the total area of floor to be warmed, buy a mat or mats of the correct size – never larger!

For example: If you have a 2.5m² floor area, choose the 2.4 -3.1m² mat. If you have an area larger than the sizes offered, you can use a combination of mats to achieve the correct size. Remember you must keep the cable spacing the same for each mat you use – if you don't, you'll have uneven warmth under the floor.

Note: If you use more than one mat you must take each of the connection cables back to the controller.

WICKES COIL SYSTEM

This system is ideal for small or oddly shaped areas. It does however take more time to lay over larger areas. If you have a little more time to spare or a fiddly odd shaped room, this is the system for you.

- A fixed length of earth-screened electric warming cable, factory fitted with 3m cold tails for connection to the mains supply.
- Each kit is supplied with primer and roller, wire and power cable, fixing tape and installation manual.
- Three size options; 300W, 500W and 1000W
- Suitable for areas of between 1.5 and 25m².
- Can be used with a programmable thermostat* and probe sensor* to

maintain a comfortable floor temperature.

* Recommended. Sold separately as only one is needed per installation, even when using several heaters, up to 3 x 1000W.

SIZING GUIDE

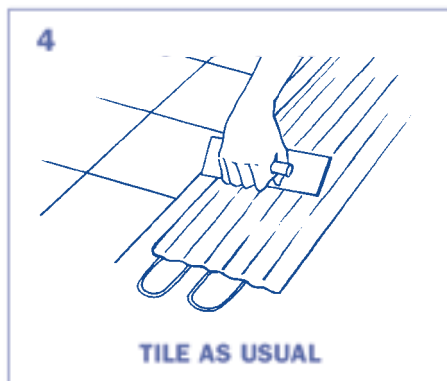
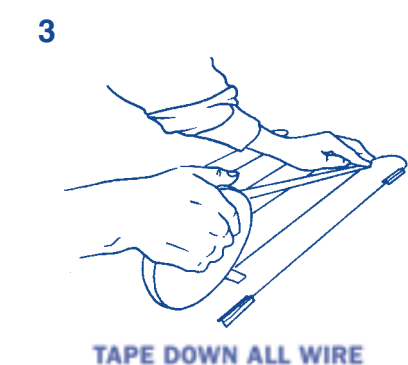
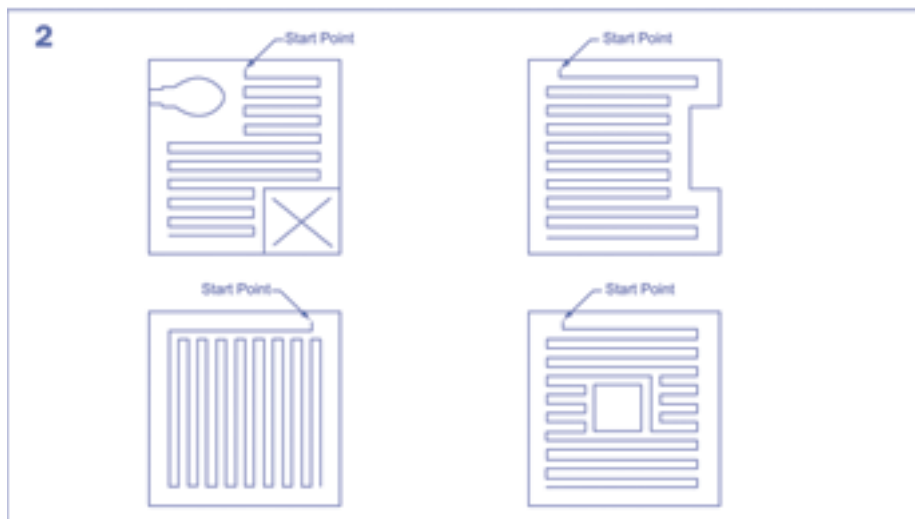
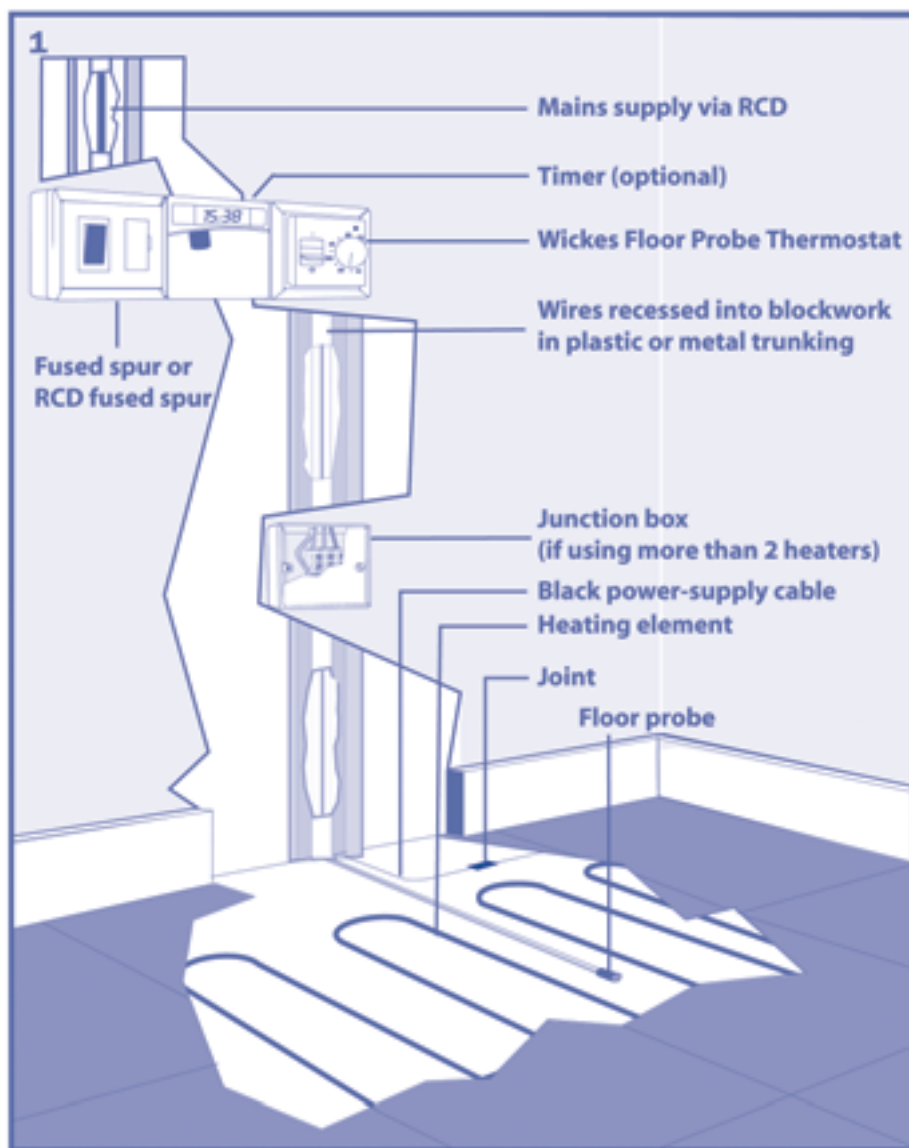
For coil system areas above 25m² please contact the Helpline for further assistance. **(0845 345 0176 - calls charged at local rate).**

WORK SEQUENCE

- Prepare the subfloor. If this is concrete ensure that it is fully dry. If you have a timber floor this must be covered with either Thermal Aquapanel or with exterior WBP 18mm plywood screwed at a minimum of 200mm centres.
- Establish location of the nearest electrical point. Fit metal boxes, cabling and protective channelling.

Provide mains supply to thermostat.

- Ensure that the floor is free from sharp or rough objects. Apply primer (supplied). Avoid traffic over the floor once the primer has been applied.
- Mark up the perimeter and warming elements spacing on the floor. See **Diagram 2**.
- Lay out the warming elements and tape ends with 2.5cm (1") tape strips.
- Once correctly configured tape down completely. See **Diagram 3**.
- Fit the Floor Probe Thermostat.
- Test the system.
- Cover the system with either Wickes Floor Tile Adhesive in conjunction with Primer & Admixture (sku 230 641) or flexible levelling compound.



Use a 'none toothed' spreader or you'll damage the cable

- Tile the floor using Wickes Floor Tile Primer & Admixture, spread with a 'none toothed' spreader.
- Wait 10 days for the adhesive to dry properly before using your new warming system.

Full instructions are supplied with this system and there is a technical Helpline if required. **(0845 345 0176 - calls charged at local rate) - coil system**

WHAT ELSE DO I NEED?

Control – The best way of controlling your system is with a Wickes Programmable Thermostat and a floor sensor. This gives you complete control of the system including the time it comes on and the temperature of the floor. If you use a manual on/off switch and a thermostat you will need to turn it on and off yourself, at least an hour before you plan to use the system. If you don't want cold feet first thing in the morning, use a programmable controller – they're not expensive.

RCD – Each system must have a Residual Current Device either on the main board or as a RCD spur. If in any doubt ask a qualified electrician to check.

Adhesive – You Must always use a flexible tile adhesive when tiling on top of an electric underfloor warming system as this allows for expansion and contraction. If you don't, the adhesive will crack and the tiles will become unattached. It is also good practice to cover the mat with a thin layer of adhesive before you tile, to protect the cables. Use Wickes Floor Tile Adhesive in conjunction with Primer & Admixture (sku 230641). Don't use a Premix flexible adhesive.

Note: As a rough guide, to cover an area of 4m² you need approximately 25kg of Wickes Floor Tile Primer & Admixture.

CUSTOMER CARE

The electrical supply to the thermostat should be provided via a 13amp fused spur using 1.5mm² cable (over 13amp at least 2.5mm² cable is required). The current must be supplied via a Residual Current Device (RCD). RCD spurs are available in store. The system must be wired via the Wickes 16amp Floor Probe Thermostat. When installed in a bathroom the thermostat needs to be sited outside the bathroom, but as close to it as possible. The supply cables should be inside suitable trunking to floor level. You will need standard electricians' tools such as insulated screwdrivers and wire strippers as well as a tile cutter and tiling tools. An angle grinder can be hired or purchased to chase out concrete floors and walls for the thermostat probe and heater tails. Only a small amount of chasing out will normally be required, in most cases a chisel/bolster can be used but please use safety glasses/goggles, gloves, a dust mask and any other equipment deemed necessary.

PROJECT SHOPPING LIST		
Product	Size	Quantity
300W Undertile Warming System	300W	
500W Undertile Warming System	500W	
1000W Undertile Warming System	1000W	
Probe Thermostat		
35mm 1G Metal Box		
13A Neon Fused Spur		
Protective channel		
Tiles of choice		
Floor Tile Adhesive	12.5/25kg	
Floor & Wall Tile Grout	5/12.5kg	
Floor Tile Primer & Admixture	500ml	
Thermal Aquapanel	1200 x 600 x 10mm	
Thermal Aquapanel Fitting	Pk 20	
Thermal Aquapanel Jointing Tape	20m	
Exterior WBP Plywood	2440 x 1220 x 18mm	

Tip: Using Wickes Thermal Aquapanel on the floor will greatly reduce the amount of work needed for chasing out, allowing for easy return of the connection cables. It will also reduce heat-up times and energy costs.

On timber or insulated concrete sub floors normal operating temperatures (floor temperature of approximately 27°C for primary warming) is reached in around one hour. Uninsulated concrete floors will take longer, normally in the region of two or more hours depending on the size of the slab and the thickness of the floor tiles, but these will retain the heat longer.

Once the tiles are warm the thermostat will maintain a constant temperature and typically the system will be "on" for approximately 40% of the time resulting in lower running costs.

In order to obtain the best efficiencies from the Undertile system it is advisable to use Thermal Aquapanel wherever possible. This will result in quicker heat up times, less downward heat loss and a more responsive and economical heating system.

KIT REQUIREMENTS	NUMBER OF KITS REQUIRED		
	300W	500W	1000W
Floor area			
m ²			
1.5-2.2	1	-	-
2.3-4.4	-	1	-
4.5-6.6	1	1	-
6.7-8.9	-	-	1
9.0-10.9	1	-	1
11.0-13.9	-	1	1
14.0-15.9	1	1	1
16.0-17.9	-	-	2
18.0-19.9	1	-	2
20.0-21.9	-	1	2
22.0-23.9	1	1	2
24.0-25.0	-	-	3

Thermal Aquapanel

Thermal Aquapanel is a lightweight insulated tile backing board developed specifically for use with tiled floors. It consists of a Polyfoam core with glass fibre reinforced polymer-modified cement faces.

Thermal Aquapanel is dimensionally stable, doesn't rot or warp and provides excellent resistance to moisture. It also offers the additional benefit of a high level of thermal insulation, making it the ideal substrate for floor tiling and undertile heating systems.

It has several advantages over traditional substrates:

- Full resistance to moisture absorption and subsequent breakdown.
- Lightweight and easy to handle.
- A dry process thus eliminating unnecessary delays associated with floor screeds.
- No need for special tools, saving you time and money.
- Keyed surface ready to receive tile adhesive.
- Vermin and rotproof.
- Light and easy to work with.

Thermal Aquapanel is extremely light (2.6kg/m^2). It's easy to cut (using a fine tooth saw, jigsaw or trimming knife, for example) and to work with. As Thermal Aquapanel has cement-based faces you should wear a nose and mouth mask when cutting to prevent particle inhalation.

Panels are 1200 x 600 x 10mm.

On solid concrete floors the benefit comes from preventing heat loss downward to the sub-floor.

Tiled floors often get wet and on suspended timber floors this will eventually lead to tiles lifting as the grout and adhesive breaks down and water gets through to the timber sub-floor causing it to swell and warp. Using Thermal Aquapanel will eliminate many of the problems associated with damp penetration, especially on suspended timber floors, whilst also providing insulation against heat loss.

How to Lay Thermal Aquapanel

Thermal Aquapanel can be laid on concrete or timber sub-floors. Both must be strong enough to take the additional weight of the panels, adhesive and floor tiles without any movement. If in any doubt you should contact a suitable qualified person for advice.

Sub-floors, whatever the type, must be sound and flat so that the panels sit flat on the surface. If fixing onto floorboards, any loose boards must be secured using screws (not nails) ensuring that these are not driven into pipes or cables below the surface. On concrete floors any old tiles and adhesive must be removed to create a clean, dry flat surface. New concrete floors must be allowed to dry/cure. This takes around one week per inch depending on site conditions. The panels are bedded on a bed of flexible cement based ceramic tile adhesive - ready mixed adhesives must not be used. **Diagram A**



Lay the panels onto the adhesive with staggered joints, similar to those found in brickwork. **Diagram B**

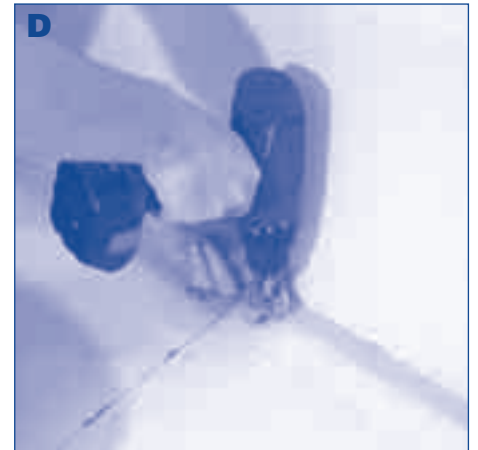


Lightly butt the panels together ensuring that they are level and ensure that there is a 3mm gap around the perimeter of the room. **Diagram C**



On suspended timber floors secure the panels with fixings at the rate of five per m^2 , making sure that they are a minimum of 30mm from the edge of the panels.

Diagram D

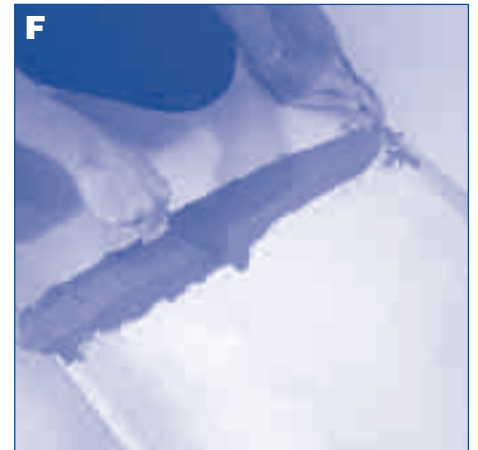


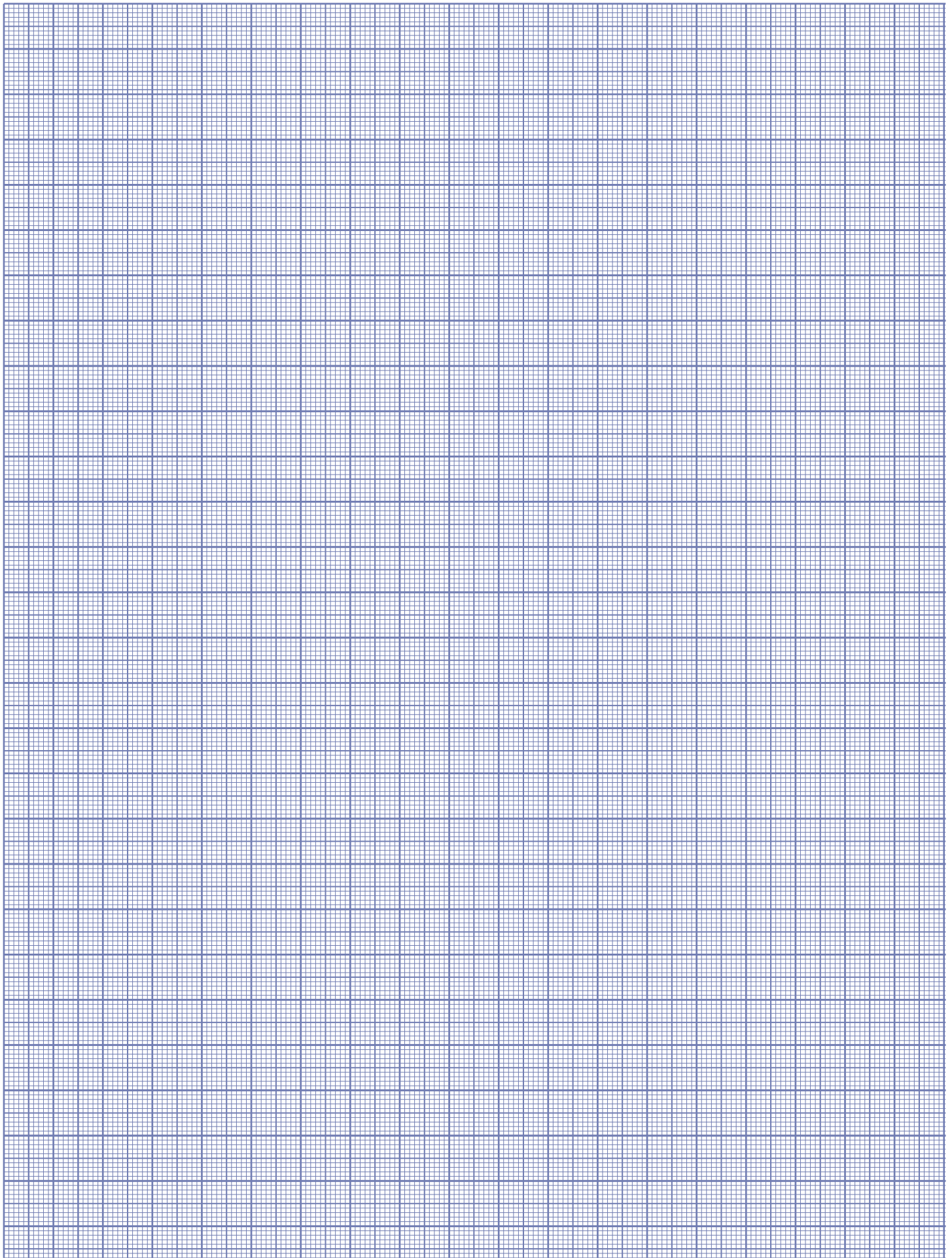
Tighten the fixing screws and use a rubber mallet to drive the washer flush with the panel, then re-tighten the screw. Make sure the floor is still level and leave the adhesive to set. **Diagram E**



Fill joint with adhesive and bed Aquapanel Joint Tape into it whilst still wet, allow to set and then follow instructions to lay Undertile Warming System or tiles.

Diagram F





Whilst every care has been taken to ensure that the product design, descriptions, specifications and techniques of constructing the products are accurate at the date of printing, Wickes products will inevitably change from time to time and the customer is advised to check that the design, descriptions, specifications and techniques of constructing any of the products described in this leaflet are still valid at the time of purchase or placing an order.

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